

REMARKS

Claims 1 and 3-28 are pending in the application. Claims 4-8, 13-15, and 25-28 are withdrawn from consideration based on the restriction requirement of 10/05/2005. The Applicants hereby request further examination and reconsideration of the application in view of these remarks.

Submitted herewith is a petition from requirement for restriction under 37 CFR 1.144, in which the Applicants argue that reinstatement of the previously withdrawn restriction requirement of 10/05/2005 is improper.

On page 2 of the office action, the Examiner rejected claims 1-3, 9-12, and 16-24 under 35 U.S.C. § 102(b) as being anticipated by Erb. For the following reasons, the Applicants submit that all pending claims are allowable over Erb.

Claims 1 and 3-23:

Claim 1 is directed to a sensing system adapted to measure one or more values corresponding to one or more physical parameters. The system has (i) a first sensor mounted onto a side of an optical fiber and optically coupled to said fiber and (ii) a first optical filter inserted into the fiber. When interrogated with light coupled into the fiber, the first sensor generates an optical response corresponding to a first value of a first physical parameter to provide a measure of the first value. The first filter is adapted to direct light corresponding to the first sensor between the fiber and the first sensor.

In the rejection of claim 1, on page 2 of the office action, the Examiner stated that “Erb discloses ... a filter [that] is adapted to direct light to the first sensor between the fiber and the first sensor.” The Examiner did not provide any information to explain which element disclosed in Erb the Examiner considers to be an example of the first optical filter recited in claim 1. Accordingly, the Applicants request clarification and an explanation of how, in the Examiner’s view, Erb discloses that element of claim 1. The following arguments are based on Applicants’ best guess about the possible grounds of this rejection.

Erb’s Fig. 1 shows an optical system, in which light from light source **21** is directed by reflector **28** into optical fiber **17** having fiber section **7** and sensor **9**. Fluorescent emission excited by this light in sensor **9** exits fiber **17** and is directed, through band-stop filter **26**, to detector **27**. Band-stop filter **26** filters out the fundamental excitation light to enable detection of the (relatively weak) fluorescent emission generated by sensor **9**. Erb’s Fig. 6 shows additional details of sensor cartridge **10**, which contains sensor **9**.

First of all, it is submitted that Erb’s Figs. 1 and 6 do not show any optical filters inserted into the optical fiber. Indeed, apart from fiber section **7** and sensor **9**, Erb’s Fig. 1 shows only one additional optical element, i.e., coupling capillary **15**, that is located within the optical fiber. Functional description of coupling capillary **15** is found in Erb’s col. 13, lines 9-21, and reads as follows:

Positioning apparatus body (**13**) is mounted on a translating component (**11**) which slides along track (**12**). Track (**12**) is mounted on the sensor housing, as is coupling capillary support (**18**), in a manner such that fiber assembly (**7**) is brought into coupling capillary (**15**) when positioning apparatus body (**13**) is translated along track (**12**) in the direction of capillary coupler (**15**). When fiber assembly (**7**) has been brought into contact with annularizing fiber (**17**) in coupling capillary (**15**), a screw is tightened to hold positioning apparatus body (**13**) in that location. To change cartridges, said screw is loosened, positioning apparatus body (**13**) is

translated away from coupling capillary (15) along track (12), hinged support (19) is unclasped and opened and sensor cartridge (10) is replaced.

It is clear from this description that coupling capillary 15 serves to ease mechanical attachment of sensor cartridge 10 to optical fiber 17, and does not perform any optical filtering functions. As such, coupling capillary 15 is not an optical filter and cannot serve as an example of the “first optical filter inserted into the fiber” recited in claim 1.

Regarding reflector 28 and band-stop filter 26, it should first be noted that these optical elements are stand-alone optical elements that are not in any direct physical contact with fiber 17. As such, none of these elements can possibly serve as an example of the “first optical filter inserted into the fiber” explicitly recited in claim 1. In addition, claim 1 specifies that “the first filter is adapted to direct light ... between the fiber and the first sensor.” In contrast, reflector 28 is adapted to direct light between light source 21 and fiber 17, and not between fiber 17 and sensor 9 (see Erb’s Fig. 1), as would be required to anticipate the relevant limitation of claim 1. Similarly, band-stop filter 26 is adapted to direct light between fiber 17 and detector 27, and not between fiber 17 and sensor 9 (see Erb’s Fig. 1), as would be required to anticipate the relevant limitation of claim 1.

For all these reasons, the Applicants submit that claim 1 is allowable over Erb. For similar reasons, the Applicants submit that claims 17 and 20 are also allowable over Erb. Since claims 3-16, 18-19, and 21-23 depend variously from claims 1, 17, and 20, it is further submitted that those claims are also allowable over Erb.

Claims 11 and 24:

Claim 24 is directed to a sensing system adapted to measure one or more values corresponding to one or more physical parameters. The system has (i) a first sensor mounted onto a side of an optical fiber and optically coupled to said fiber and (ii) a catheter having an external tube and an internal tube enclosed by the external tube. When interrogated with light coupled into the fiber, the first sensor generates an optical response corresponding to a first value of a first physical parameter to provide a measure of the first value. The internal tube accommodates the fiber. The first sensor is exposed on an exterior of the external tube. The first physical parameter is pressure. The catheter is adapted to be inserted into a blood vessel to enable the first sensor to sense blood pressure therein.

The Applicants submit that Erb’s sensor cartridge 10 is not adapted to be inserted into a blood vessel because the sensor cartridge has large and massive support blocks 19 (see Erb’s Fig. 6) that are simply incompatible with such blood-vessel insertion. Furthermore, nowhere in her specification does Erb teach or even suggest that sensor 9 can be used to sense blood pressure in a blood vessel.

For all these reasons, the Applicants submit that claim 24 is allowable over Erb. It is further submitted that the same reasons that make claim 24 allowable over Erb also serve as additional reasons for the allowability of claim 11.

Claims 25-28:

Claims 25, 27, and 28 are equivalent to original claims 13, 15, and 16, respectively, rewritten in independent form. In the office action of 08/24/2006, the Examiner found original claims 13, 15, and 16 allowable over Erb. The Applicants submit therefore that claims 25, 27, and 28 are allowable over Erb as well. Since claim 26 depends from allowable claim 25, it is submitted that claim 26 is also allowable over Erb.

In view of the above remarks, the Applicant believes that all pending claims are in condition for allowance. Therefore, the Applicant believes that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

Respectfully submitted,

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